

U-TURN



Ideal for Final Cut Studio users, the modular JVC GY-HM790U excels in both field and studio environments

BY GEORGE AVGERAKIS

Two JVC camcorders are hanging from my hands. In my right is my trusty D-9 SD DY-90W, bought in 2001. Costing \$30,000 with lens, weighing 17 pounds (all weights given are without batteries) and shooting NTSC SD with $\frac{2}{3}$ -inch 16:9 CCDs to $\frac{1}{2}$ -inch video cassettes, it served me well but is now totally obsolete. In my left is the new GY-HM790U that I review here, selling for \$10,995 (including a Canon f/1.6, 14x lens), weighing 7.5 pounds and shooting full HD on $\frac{1}{3}$ -inch CCDs to inexpensive SDHC (Class 6); it's probably the best choice studio/field camcorder for today's market.

How does one compare the 790U to other cameras, when the market is no longer a simple choice between similar specifications and a variable price point? The 790U can't be compared to a Panasonic AG-HPX370 P2 camcorder or a Sony PMW-EX3 any better than to a Canon HD DSLR.



Each is unique and designed for a specific niche market.

JVC, an engineering innovator, bets big time with each of its innovations. Perhaps the main market for the 790U is the Final Cut Studio user and field video shooter. The choice to design a camera around Apple's proprietary MOV format was a good one.

"We introduced the GY-HM100 at Macworld in 2009 before NAB, and the Apple world was very enthusiastic," says David Walton, JVC Communications Marketing Manager. "The next year, we debuted the 700 series and the response was unbelievable."

FORM FACTOR

The 790U is a shoulder-mount, field-friendly camcorder that swings AC-DC. Equipped with both remote truck features and studio attachments, it has attracted both studio engineers and execs. Stripped of studio gear and powered with an Anton/Bauer InterActive 2000 battery clipped to the rear, it balances comfortably on a pixie's shoulder. Add a beefier battery and a cine lens adapter, and it still balances righteously and can run all day without a recharge. Choose either the .45-inch LCOS color eyepiece, the foldout four-inch, 16:9 color-view screen, or the VF-HP790 LCD studio viewfinder for studio work, and you're ready to roll. You also may appreciate the built-in timecode in/out jacks, genlock and pool feed inputs (switchable to SD) and 4:2:2 HD-SDI connectors. The eyepiece's wide diopter adjustment allows most myopic people to avoid using eyeglasses, which is very considerate. If you're planning to load the 790U for the studio, you'll also want the KA-M790 Multicore Module, which when snapped on the back, offers intercom features, a 26-pin connector and prompter out-jack.

For years, I've been suggesting that camcorder manufacturers split the cost of a top-rated interface designer to organize the ever-growing list of user functions. While most digital user menus in the 790U are well-organized and presented, this camera offers extensive options for customization of the image look, including sinusoidal gamma curves that emulate those in cine film. Serious cinematographers no doubt will spend



TOP: The JVC GY-HM790U shoots full HD on $\frac{1}{8}$ -inch CCDs to inexpensive SDHC cards. ABOVE: Because of its interchangeable-lens mount, the 790U also can be used for studio work.

hours tweaking and colorizing to get a specific setting. Such settings can be saved, exported and even shared on a variety of online forums. Of course, with a simple menu choice, the camera can be reset quickly to its factory default, suitable for everyday ENG work, as is the full Auto setting.

The physical user controls are placed around the camera in a fairly logical way. Your most important controls (including three user-programmable buttons) are grouped nicely right under your nose. Media-selection switches are on the right side of the camera where you insert the SDHC cards. Thankfully (finally!), nothing but battery connectors are found on the rear face of the camera.

Clearly, JVC has improved ergonomics over prior models and competitors. All compact audio/video monitoring, for instance, is in one row of dials under the viewfinder, while LCD controls are

revealed under the LCD. However, the audio monitoring and timecode mode switches don't belong here, nor does the "full auto" switch belong up behind my earlobe where I'm certainly *not* going to find it when I need to quickly go auto.

The audio monitor—a badly designed aspect of most camcorders—has been improved to an externally mounted, foam-rimmed earphone that actually plays loud enough to hear while shooting from the shoulder. This plugs independently into the only audio-monitoring jack, making two-person monitoring impossible without a Y-connector.

OPERATION

Igniting the 790U, the first thing you notice is the trademark multicolored backlit Operation Mode Indicator (Blue = Camera, Green = SD Card Media Management, Orange = USB/FireWire Transfers). At first, I thought this eye-catching device was pointless, power-wasting branding, but once under client pressure, it was good to be able to glance ahead of the viewfinder and know whether it was saving data to a backup drive or ready to shoot.

Standard recording is to one of two inexpensive SDHC cards, which come in sizes ranging from 4 GB (up to 23.5 minutes) to 32 GB (up to three hours). When one card is full, the 790U automatically starts recording on the next one, allowing for fast rotation of cards when editing in the field. Using a USB cable, the camera can dump card content to a laptop while not shooting.



For studio work, the KA-M790 Multicore Module offers intercom features, a 26-pin connector and a prompter out-jack.

While the 700 series was designed for the popularity of Final Cut Pro, those wishing to record to XDCAM EX-compatible MP4 and standard-definition AVI can do so with a simple menu selection. Both MOV and MP4 can be recorded simultaneously

with the optional memory box. We took cards directly from the camera to an on-set Apple laptop and immediately edited in FCP directly from the cards (although saving to an HDD is recommended).

The 790U records in a wide range of HD formats such as 1920x1080 (1080p24/p25/p30, 1080i60/i50), 1440x1080 (60i/50i), 1280x720p (p60/p50/p30/p25/p24) and 720x480 (60i). Undercranking (fast-mo) and overcranking (slow-mo) are also supported, from 10 to 60 fps.

I found recording to SDHC cards easy and convenient, and although I worried about losing the tiny cards among the lint in my pockets, I don't miss lugging Betacam or S-VHS cassettes around anymore. For those worried about using only one, solid-state recording medium, the 790U supports an optional SxS Media Recorder module that snaps on the back of the camera.

Further worries are dispensed using the Pre Rec or Retro Cache feature. Here, the camera continually records into cache memory so that whenever the trigger is actually pressed, the start instant of the recorded clip is up to 20 seconds earlier—great for covering wildlife and other fast-breaking subjects.

Although both the eyepiece viewfinder and the flip-out screen are very high resolution, I would recommend employment of a full-size HD monitor. Too often the high definition of details found in HD video are discovered in the editing room, when a reshoot isn't possible. However, JVC has developed an exclusive Focus Assist feature that improves focal precision without reliance on a large monitor. When activated, the image in the viewfinder (or the LCD viewscreen) becomes monochrome

and all objects that are in focus obtain a colored edge. I prefer to activate Focus Assist through the viewfinder, using the programmable Return button on the lens and then rechecking the result on the nonassisted, color-LCD panel image.

A spot exposure meter—with four modes—is especially useful in high-contrast lighting conditions. The highest and lowest light levels are identified with red (max) and white (min) markers, and each of these can be set manually, individually or together.

Simultaneous, down-converted SD signals can be obtained from component and IEEE 1394 jacks when in record mode for viewing takes on inexpensive monitors or for use in Adobe's new OnLocation CS5 software, providing sophisticated signal monitoring on a laptop.

CONCLUSION

For decades, I've successfully relied on the JVC cameras I've owned to further my career in a very wide range of applications, from comfortable Manhattan soundstages to the hostile environment of the Amazon rain forest under political duress. The 790U suitably continues my satisfied expectations. Although the pricing of JVC cameras is well below their technical superiority, JVC has eschewed, for years, the slick marketing that makes certain brands de rigueur in agencies and studios. Consequently, you may find yourself having to prove your camera's superiority with humility and great work, but such an attitude is the hallmark of a great craftsman. HDVP

To learn more about the JVC GY-HM790U, go to pro.jvc.com.
